Heroin Task Force Report

Confronting the problem of heroin abuse in Seattle and King County

August 2001

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TASK FORCE OVERVIEW

The Rise in Heroin Use

During the late 1990s, numerous key indicators spoke to an alarming rise in the problem of heroin use within Seattle and King County:

- Opiate-related deaths in King County (mainly from heroin) reached an all-time high in 1998 at 144 individuals, exceeding the number of deaths from automobile accidents (1).
- Several local studies pointed to heroin use on the rise in the late 1990s, particularly in young injectors (2).
- The national Arrestee Drug Monitoring Program (ADAM) showed that for the first half of 1999, 17 percent of arrestees in King County jails tested positive for opiates in their urine (3). This ADAM program finding gave King County jails a second place rank, in a tie with Chicago, for opiate presence out of 35 major cities from around the country. Only Philadelphia jails experienced a higher rate among arrestees.

Compounding the problem, treatment options for opiate dependent people who wanted to quit were severely limited when they had limited or no insurance or personal resources. In 1999, over 600 opiate addicts in King County were turned away from methadone treatment programs and placed on a waiting list (4).

Heroin use escalated despite increasing levels of law enforcement activity to address drug use. In King County, over sixty percent of the budget is dedicated to public safety and criminal justice, largely due to the impact of increasing drug use, including heroin.

The impact of increasing drug usage, without a concomitant increase in treatment services, presented a clear and present danger in our communities. The effects had permeated our society, extending beyond the realm of criminal justice and public safety to impact critical social and health services. Moreover, the health of our communities and our families had been shaken and sometimes broken, leaving thousands of lives in the wake of its destructive force.

The “war on drugs” was not working, and immediate action was needed.

Responding to the Heroin Use Epidemic

In light of these new, troubling findings, in 1999 Seattle Mayor Paul Schell and King County Executive Ron Sims established a heroin initiative. The mission of the heroin initiative was to form a partnership of government and community leaders, identify problem areas, and advocate for changes in several areas related to the problem of heroin use. These areas of investigation included:

- Public perception of heroin use and economic impacts of drug use
- The criminal justice system
- Treatment capacity and access
- Health impacts of drug use/education of health providers

- Emergency response to heroin overdoses
- Intervention programs for youth and families at-risk for drug use

Creation of the Heroin Task Force

As part of the initiative, the Mayor and County Executive created a Heroin Task Force. This Task Force was composed mainly of community leaders, elected officials, and individuals from the affected population. (A list of active Task Force members can be found in Attachment 1.)

The Task Force was charged with identifying recommendations for reversing the trend of heroin use in Seattle and King County. Once recommendations were formed and presented, the Task Force would then take appropriate steps to advocate for change with state, regional and federal policymakers.

Approximately 30 people were invited to be part of the Task Force, and 23 actively participated in the process. Task Force members were asked to attend monthly meetings and participate in briefings and discussions that would lead to the formation of recommendations. Meetings began in May 2000 and ran through December of that year.

For each of the six areas identified above, technical experts were invited to Task Force meetings to present background information, review recent research and data sets, and offer conclusions and/or recommendations. The Task Force then discussed the information, questioned the presenters, and formed a set of recommendations based on the information and discussion.

RECOMMENDATIONS AND PRINCIPLES

Recommendations

The Task Force agreed upon a range of recommendations in the areas of health care, emergency services, public safety and criminal justice, treatment, and prevention. These recommendations were prioritized within each major area as well as across all recommendations.

To identify the top priorities, Task Force members were asked to name the recommendations that would make the most significant difference in the heroin problem in King County. As a result, the following priorities were identified (listed below in rank order):

Priority #1 - Begin to provide treatment to all heroin addicts who request it, without limitations of waiting period, insurance/funding or location. This should be accomplished through:

- *Funding currently unfunded methadone slots*
  The capacity for additional treatment exists in Seattle and King County, but funding is not available to support treatment. For instance, there are currently around 700 new unfunded methadone slots in King County, created by the addition of two new licenses. The County will fund approximately 300 of these slots beginning July 1, 2001. However, that funding will be only for Title 19 eligible individuals, leaving the remaining 400 slots unfunded.

- *Eliminating artificial caps on capacity for methadone treatment and minimizing categorical funding streams for all treatment modalities*
  At present, each county in the state has the power to decide whether or not to have a methadone clinic established within its borders. For those counties that do pursue a clinic license, a maximum of 350 slots are allowed per license. Given this cap for those counties that do want treatment, along with the fact that many counties have not supported the establishment of clinics within their own borders, current treatment capacity is far exceeded by demand. Obstacles to providing treatment for all that request it should be removed. Within King County alone, there is currently a waiting list of 500-600 people at the Needle Exchange who have requested treatment but are unable to receive it because of limited treatment capacity, no source of funding for treatment or both.

- *Creating more funded treatment options in the criminal justice system, including judge-ordered treatment and treatment through drug court*
  Currently, the only option to incarceration for those arrested on drug charges is Drug Court. Judge-ordered treatment should be another option to incarceration for individuals that do not qualify for drug court.

- *Expanding treatment options for stable, long term methadone clients.*
  Currently, Harborview Medical Center has a waiver program to see stable, long term methadone clients. Identifying and training more providers to be involved in treatment could expand this program.

Priority #2 - Educating users about the dangers of using heroin alone, mixing opiates with other drugs, and the most susceptible times for overdoses; in particular, educating people in jail about the higher risk of overdose upon release.

- *Developing appropriate education programs*
  Public Health – Seattle and King County currently has a grant from TIDES Foundation and Lindesmith Center to design and implement these types of education programs.

Priority #3 - Identifying gaps in prevention services and enhancements to better coordination and integration

- *Taking advantage of opportunities to implement prevention modalities*
  Public Health needs to identify these opportunities and pursue funding for their support. In addition, Public Health can act as the catalyst for better coordination and integration of prevention services.

All recommendations agreed upon by the Task Force can be found in Attachment 2 as well as listed in the report under the appropriate topic area.

Underlying Principles for Recommendations

Two primary goals guided the recommendations made by the Task Force:

(1) Help individuals addicted to heroin return to useful, productive lives.
This will involve a substantial expansion of treatment, health care and support services to addicts in order to fashion a healthier society. It will also require redefining service success in terms of facilitating more stable lives.

(2) Decrease the overall human suffering and monetary costs to the community due to heroin addiction.
This involves breaking the cycle of addiction, revising law enforcement and judicial policies, emphasizing prevention and strategies to mitigate harm, supporting families and communities, and changing public perception around addiction.

Although Task Force members agreed on these goals, they sometimes differed on the strategies and priorities to best accomplish them. Discussions with presenters and among Task Force members and guests displayed creative tensions over immediate priorities.

Several discussions included the theme of balancing priorities:

- Increasing public safety expenses and the need to devote more resources for treatment
- Focusing on future generations through prevention efforts and addressing the needs of current heroin addicts
- Changing public attitude toward heroin addiction over time and making immediate policy changes without public understanding of the addict or problems of addiction;
- Dispatching police with the emergency medical response team at heroin overdoses (for safety concerns and investigation) and heroin users' fear that calling 911 will result in being arrested

Task Force members did share concern in what they saw as overly restrictive licensing and regulation of methadone distribution and methadone maintenance treatment (MMT), and saw a need for wider distribution of the drug by private physicians. A few members suggested that legalization of heroin would address of many of the problems faced by addiction.

The recommendations contained in this report represent the best efforts of the Task Force to balance these and other tensions.

Challenges for Change

The Task Force believes that modifying the current system to better treat addiction will necessarily be a large undertaking, requiring public and private support alike. Large systems will have to work cooperatively, including public health, treatment, medical care, mental health, public safety, and criminal justice. In addition, the public and policy makers will also need to be educated about the problem, the consequences of the status quo, and the opportunities for change.

In spite of the enormity of the problems and barriers to change, the Task Force believes that Seattle and King County, with the support, leadership and advocacy of private citizens, can make a significant difference in addressing this issue.

In order to accomplish this, the Mayor and King County Executive must work in concert to reduce and prevent heroin addiction:

- Develop a collaborative Seattle/King County approach to drug abuse treatment and prevention, with an emphasis heroin use.
- Create a profile of heroin users by analyzing existing police, medical examiner, public health, state police lab, treatment and DEA data and deciding what additional data should be collected.
- Encourage city and county agencies and departments to think more creatively about how categorical funds could be used to address the impact of heroin in Seattle and King County.
- Encourage demonstration/pilot projects supporting the recommendations.

Furthermore, the Mayor and King County Executive need to provide leadership in educating the public about the economic and social benefits of treating drug addiction as a public health issue:

- Develop an educational strategy that helps the public and fellow policymakers understand the challenges of addicts, addiction and recovery.
- Explain how tax dollars are currently used to address addiction and compare to the relative benefit of using tax dollars differently to achieve more stable and productive lives.
- Educate the public and fellow policymakers about the proven effectiveness of treatment, and have readily available statistics on the cost and effectiveness of various treatment modalities, including drug-free and methadone treatment, as well as incarceration and alternatives to incarceration.

The following report will present epidemiological data on heroin use as well as provide background data and information that were instrumental in forming the recommendations made by the Task Force. Task Force recommendations are offered at the end of each section for the following topic areas: the criminal justice system, treatment capacity and access, health impacts of drug use/education of health providers, emergency response to heroin overdoses, and intervention programs for youth and families at-risk for drug use. A full list of recommendations can also be found in Attachment 2.

BACKGROUND

Heroin Use – Epidemiology and Natural History

Nationally, indicators of chronic drug use (e.g., mortality, ER admissions, drug treatment admissions, arrest urinalysis data) show that crack cocaine and heroin are the predominant sources of illicit drug problems. While indicators of chronic use suggest a plateau in use of crack cocaine, heroin use continues to increase (5). Heroin use predominantly affects males and females in their most productive work years (25-54 years of age).

A National Institute on Drug Abuse household survey showed that 2.4 million people in the United States have used heroin (6), and the Office of National Drug Control Policy estimated that there were over 800,000 chronic heroin users in the US in 1995. Locally, it is estimated that there are 15,000-20,000 injectors of illicit drugs in King County. Of those, 70 percent primarily use heroin (7).

Local studies indicate an increase in the number of users reporting heroin as their primary drug. One study, conducted in the Seattle-King County area from 1988 to 1991, showed that 70 percent of injection drug users cited heroin as their drug of choice (8).

In addition, two more recent, local epidemiological studies of injection drug users in Seattle suggest that new study recruits and young injectors are highly likely to report heroin as their primary drug. These studies show that heroin use increased in 1998, particularly among younger injectors. The number of new study recruits reporting heroin as their primary injection drug increased from 61percent in 1994 to 86 percent in 1999. Among injectors younger than 20, the proportion reporting heroin use increased from 78 percent in 1994 to 100 percent in 1998. In the 20-29 age group, the increase was somewhat smaller, from 75 percent in 1994 to 80 percent in 1999 (9).

According to a 1997 report from the National Institute of Health, most individuals addicted to heroin began use of drugs -- such as tobacco, alcohol, and inhalants -- by 11 to 13 years of age. Marijuana is usually the first illegal drug used, and users of marijuana seem more likely to move on to other illicit drugs than non-users of marijuana. When heroin use begins it often escalates to abuse (repeated use with adverse consequences) and then to dependence or addiction (usually characterized by opioid tolerance, withdrawal symptoms and compulsive drug taking). This “addiction career” is often accompanied by periods of imprisonment. (10).

What is not clear about the natural history of opiate dependence is whether repeated use begins as a medical disorder, or whether socioeconomic and psychological factors lead an individual to try, and then later to compulsively use, opiates. Twin, family, and adoption studies show that vulnerability to drug abuse, like other chronic medical diseases such as

diabetes, may be a partially inherited condition with strong environmental conditions (11).

Characteristics and Origins

Created from the processing of morphine, heroin is a highly addictive drug. Heroin and morphine are opiates, both originating from a naturally occurring substance extracted from some types of poppies. Once inside the system, heroin is broken down to morphine.

Heroin comes predominantly from four areas around the world -- Southeast Asia, Southwest Asia, South America, and Mexico. It is typically sold in one of two forms: a white or brownish powder or a black, sticky substance known as "black tar" heroin. The latter, which is only possible to administer by injection, is the predominant form of heroin in King County.

This "black tar" heroin comes to King County from Mexico via the Yakima Valley and the Interstate 5 corridor. Purity of heroin available in King County has remained fairly stable since the early 1990s, ranging from 13.4 to 27.9 percent (12). Once in the King County area, distribution of heroin is largely conducted through telephone and pager networks. The shift to non-injection (e.g., chewing, sniffing or smoking) observed in other US cities has not been widely seen in Seattle and King County (13).

Use and Dependence

With intravenous injection of heroin, typically in the arms or legs, euphoric effects are experienced by the individual in 7-8 seconds, while intramuscular and subcutaneous injection shows peak effects in 5-8 minutes.

For an addict, the "rush" or euphoria experienced by the administration of heroin wears off quickly, followed by a period of somnambulense ("nodding"), normalcy, and descent into withdrawal symptoms. The individual then experiences an intense craving to use more heroin to stop the withdrawal and reinstate the euphoria or feeling of normalcy. The cycle of euphoria to withdrawal and craving is repeated several times a day. An individual who uses heroin multiple times a day subjects his or her body to marked fluctuations that can disrupt a number of important bodily functions.

Heroin dependence is a chronic, relapsing disease characterized by compulsive drug-using and neurochemical and molecular changes in the brain; long term drug use results in significant changes in brain function that persist long after a person stops using drugs (14). With physical dependence, the body adapts to the presence of the drug and withdrawal symptoms occur within a few hours. These symptoms include restlessness, muscle and bone pain, insomnia, diarrhea, vomiting, cold flashes and goose bumps. Immediate withdrawal symptoms peak in 24-72 hours and last about a week, but long-term changes in the brain are associated with prolonged drug craving and a tendency to relapse long after acute withdrawal symptoms resolve.

Determinants of heroin use and dependence generally fall into five categories:

- Home environment – includes lack of attachment to parents, sexual and physical abuse, economic instability, and a chaotic home life related to substance use or mental illness in family members.
- Social interaction factors - includes inappropriate, shy, or aggressive behavior, and failure in school performance.
- Environmental factors - includes availability of drugs and trafficking patterns, and beliefs that drug use is generally tolerated
- Genetic traits
- Mental illness

Conversely, several protective factors, or those characteristics associated with non-drug users, have been identified. These include: consistent discipline, a strong parent-child bond, high levels of supervision, parental warmth and emotional support, and strong bonds with pro-social institutions such as school and religious organizations. Risk and protective factors, along with the resulting recommendations for policy, are discussed further in the "Intervention Programs for Youth and Families At-Risk for Drug Use" section of this report.

Public Perception and Economic Impacts of Heroin/Drug Use

Drug use and its effects permeates every corner of our society:

- Inner cities, affluent suburbs, and rural communities
- Rich and poor
- Educated and uneducated
- Professional workers, blue collar workers, as well as the unemployed.

Contrary to popular belief, seventy-three percent of illicit drug users in America are employed (15).

Especially troubling is the fact that substance use remains stubbornly common among adolescents and young adults. The percentage of school children using drugs in 1998 was higher than in 1991, and heroin use by 12^{th} grade students increased more than 100 percent from 1990 to 1997 (16).

No individual, family, or community is immune from the effects of substance use. Nationally, approximately 55 percent of the economic burden of alcohol and drug problems is borne by those who do not use substances (17). Various cost estimates postulate that failure to provide accessible and effective treatment cost US taxpayers $276 billion a year (18). Included in these costs are expenditures for medical care, law enforcement, motor vehicle accidents, lost productivity and incarceration. Not included are consequent foster care and social services for children whose parents fail to receive treatment.

In Washington State, total economic costs of drug and alcohol abuse were estimated in 1996 at $2.54 billion (19). This figure includes both direct costs, when payments are

made for medical care ($211 million) and substance abuse treatment ($160 million), and indirect costs resulting when resources are lost in premature death ($929 million), crime ($541 million), morbidity ($369 million), and other related costs consisting primarily of property damage from motor vehicle accidents ($254 million). The largest indirect costs in 1996 resulted from premature death (34 percent of total costs) and crime including law enforcement and correctional costs (20 percent of total costs). In terms of substance, alcohol accounted for 59 percent of the total costs in 1996 and drugs accounted for the remaining 41 percent. However, in comparing to 1990 costs, there was a net increase of 20 percent in drug related costs in 1996 and no increase (after adjusting for inflation and population growth) for alcohol related costs. The primary reason for this was the increased incarceration of drug offenders.

Expressed as a percentage of total treatment costs, the amount of resources devoted to treatment in 1996 represented just six percent of the costs associated with substance abuse in Washington State ($2.54 billion). Factoring in that only about 21 percent of persons needing treatment and meeting the income criteria for publicly funded services actually received care (20), the relative expenditure on treatment is even smaller. Increasing investment in treatment may yield future benefits in the form of decreased economic costs.

While debate continues about incarcerating nonviolent individuals for drug offenses as opposed to expanding access to treatment, it is clear that incarceration is more costly. A 1991 report prepared by the Alcohol, Drug Abuse and Mental Health Administration showed that the costs to society over a six month period were $21,500 for an untreated drug abuser, $20,000 for an imprisoned drug abuser, and $1,750 for someone undergoing methadone maintenance treatment (21).

Effective Treatment

Three decades of research and clinical practice have yielded a variety of effective approaches to drug treatment. Despite scientific evidence that establishes the effectiveness of drug treatment, and a growing recognition of drug addiction as a chronic, relapsing medical condition, addiction is still often seen as self-induced or a moral flaw and that efforts to treat it will inevitably fail.

In part, this perception stems from unrealistic expectations that drug use can be stopped quickly and without need for follow-up treatment. In reality, because addiction is a chronic disorder, long-term abstinence from all drugs, including legal ones, often requires sustained and repeated treatment episodes.

Considered as one of the most effective ways to treat heroin addiction, methadone maintenance treatment is often seen by the public as substituting one narcotic for another. The belief behind this perception is that moving an individual directly to a drug-free state is the only valid treatment goal. Although a drug-free existence represents the optimal treatment goal, research has shown that this goal cannot be achieved and sustained by a majority of opiate-dependent people (22).

Under a harm reduction model, experts recognize that the ideal is abstinence, but accept other alternatives short of abstinence:

- Safer routes of administration
- Alternative, safer substances
- Decreased frequency of use
- Reduced intensity of use
- Decreased harmful consequences of use

An example of decreased harmful consequences of use is having clean syringes and works more readily available for heroin addicts as a means to stop the spread of diseases such as HIV/AIDS and hepatitis. In Washington State alone, the costs associated with AIDS and hepatitis B contracted through injection drug use were estimated to be $71 million in 1996 (23). This provides a clear example of how drug use not only threatens the lives of drug users, but through unsafe sex practices, can place others at risk for serious illness or possible premature death.

HEROIN AND THE CRIMINAL JUSTICE SYSTEM

A substantial and growing proportion of people in jails and prisons are there because of drug use-related activities. These crimes generally fall into two categories: those incarcerated for possession of drugs or drug dealing, and those arrested and convicted for crimes associated with their drug use such as burglary, theft, or homicide.

Opiate addiction has often been associated with increased criminal activity to support what can easily be a $150 per day habit (24). Even among employed addicts, the expense of maintaining a habit often overwhelms earned income from their jobs. In one national study, 95 percent of opiate-dependent individuals report committing crimes during an 11-year at-risk interval. While stealing to purchase drugs is the most common form of crime for opiate addicts (25), crimes may range in severity from homicide to other crimes against people and property including shoplifting, burglary, forgery, robbery and mail theft.

Opiate Use Among the Arrested and Incarcerated

A 1989 Department of Justice study found that in some cities as many as 50-80 percent of people arrested for felonies tested positive for drugs (26). Nationally, a third of state prisoners, and one in five federal prisoners said they had committed their current offense under the influence of drugs (27). Prisoners serving drug sentences were the largest single group (60 percent) in federal prisons. Drug offenders account for 25 percent of the growth in the state prison population and 72 percent of the growth in the federal prison population since 1990 (28). Within Washington State, in 1998 there were more arrests for drug offenses than any other crime except larceny and theft (29).

Opiate use is seen in the local inmate population as well. Urinalysis data from King County Jail adults arrested in the first and second quarters of 1998 indicate that opiates were present in 17 percent of arrestees who agreed to urine testing. In addition, 75 percent of the arrestees tested positive for one illicit drug (30). The 17 percent opiate presence in urinalysis ranked as one of the three highest in 35 sites from around the country (only Philadelphia was higher; Chicago's rate equaled King County's).

For 1999, the rates dropped somewhat, although this can be attributed to the addition of the Kent and Auburn city jails, locations where fewer positive opiate tests are normally found. The numbers for 1999 showed opiates present in 14 percent of adult male arrestees booked into King County jails who agreed to provide a urine sample (over 70 percent of those approached); 68 percent of the sample were positive for at least one illicit drug.

In spite of this drop within King County in 1999, Seattle continues to be among the top areas for arrestees testing positive for opiates, ranking fifth among the 35 sites around the country, behind only Chicago, Washington, DC, New York City and Philadelphia. For the first three quarters of 2000, opiate positives averaged 11 percent. It should be noted that several changes took place in the program at the beginning of 2000, including a new sampling protocol and survey instrument that potentially affected these results. Consequently, comparisons of data before and after 2000 may not be meaningful until more is known about the impact of these changes.

From the standpoint of local prosecution data, the later part of the 1990s has witnessed rises in opiate-related offenses. From 1991 through 1996, the yearly number of prosecutions for heroin-related offenses in Seattle and King County remained steady between 2,200 and 2,600. In 1997, heroin prosecutions rose to over 3,000 and in 1998 increased again to 3,270. While significant, the data on local convictions for heroin-related offenses have not been as definitive in signaling this upward trend. For 1998, there were 1,326 convictions, dropping to 1,271 convictions in 1999. For the first three quarters of 2000, there were 1,022 convictions; this 2000 total could rival or surpass the 1998 level of convictions by years-end (31).

Sentencing Laws

The following is a summary of sentencing laws:

- For simple possession of heroin, as well as for cocaine or methamphetamine, the standard sentencing range for first offenses is 0-90 days. Multiple offenses for simple possession increase in length with a maximum standard range of 57 months and a statutory maximum of 60 months.
- Sentencing for delivery of heroin or possession with intent to deliver heroin (or cocaine and methamphetamines) is more severe than for possession. The standard range for first offense is 21-27 months and for the third offense is 67-89 months.
- Two or three years may be added to the sentence for dealing in a school zone, park or bus shelter and being armed with a firearm, respectively; another year may be added for being armed with another deadly weapon.

Treatment for Arrestees

Despite the large numbers of drug-involved individuals, the Arrestee Drug Abuse Monitoring program (ADAM) data collected from 35 cities around the country, including Seattle, show that only nine percent of arrestees are currently in treatment, 42 percent report ever having been in treatment and 46 percent report a current desire for treatment (32*).*

Treatment is an effective method of combating crime. In a 1991 study, the performance of 617 clients in six MMT clinics was studied (33). A 70.8 percent reduction in crime days was reported in the first three months of treatment (from 237.5 mean crime days per year to 69.3 crime days per year). After one year in treatment, mean crime days were reduced to 28.9 days per year.

Drug Court

Within King County, there is an innovative option to incarceration for drug possession. Founded in August 1994, the King County Drug Court Program was the twelfth program of its kind in the United States. It currently serves as a national mentor to the more than 450 drug courts across the country.

Drug Court is a pre-adjudication program that provides eligible defendants with the opportunity to receive drug treatment in lieu of incarceration. Eligible defendants can elect to participate in the program or proceed with traditional court processing. To be eligible for the program, the defendant must:

- have been arrested on a felony drug possession charge.
- have no prior adult convictions for sex or violent offenses, and no unresolved felony charges that are not Drug Court eligible.
- have no indication that they were dealing drugs (including, among other factors, possession of more than 2.5 grams of heroin, cocaine or methamphetamine).

In addition, the court considers additional criminal history, such as DUI and domestic violence, and the unique facts of the charged case.

Of those who have chosen to enter Drug Court:

- 33 percent identified heroin as their drug of choice
- 50 percent reported daily use of drugs
- 66 percent are unemployed
- 25 percent are without permanent residence

Approximately 63 percent of the defendants in Drug Court are residents of Seattle at the time of their arrest; 80-90 percent of the arrests arriving in Drug Court occur in Seattle (34).

After choosing to participate in the program, a defendant is required, under court supervision, to do the following:

- attend treatment sessions.
- undergo twice-weekly (and eventually once-weekly) random, observed urinalysis testing.
- appear before the Drug Court judge on a regular basis.

Drug Court provides outpatient drug-free, methadone, and in-patient treatment (although dollars for inpatient treatment are limited). It also works to link defendants to ancillary service providers for housing, mental health treatment, daycare, employment, education and parenting classes.

If the defendant meets the requirements of the program, which typically takes 12 to 18 months, the individual graduates from the program, and charges are dismissed. However, if a Drug Court defendant fails to meet the requirements, the individual is terminated from the program and sentenced on the original charge.

Studies show that individuals under legal coercion tend to stay in treatment for a longer period of time and do as well or better than others not under legal pressure (35). Since drug abusers may encounter the criminal justice system earlier than health or social service systems, intervention by the criminal justice system may stop or shorten a career of drug use.

Of the approximately 1,600 defendants who have entered King County's Drug Court program since 1994:

- 49 percent have graduated or are active in treatment.
- 51 percent have been terminated from the program.
- 10 percent are on bench warrant status.

When it was initiated in 1994, the Drug Court Program was supported with funding from King County, the City of Seattle, the State Department of Corrections, and the Interlocal Drug Fund. Funding for 2001 is anticipated to come from the state general fund, the federal HIDTA program (High Density Drug Trafficking Area), and King County.

The total projected cost of the program for 2001 is $1 million, 90 percent of which support treatment costs. Treatment costs per participant in the program vary from $1,700 for outpatient treatment (for up to two years), to $2,100 for six months of methadone treatment, to $4,500 for three months of inpatient treatment. Currently, Drug Court has 61 defendants on methadone treatment, which is the maximum number the program can support under present funding limitations.

The Washington State Institute for Public Policy analyzed costs and savings associated with Drug Court in their 1999 paper "Can Drug Courts Save Money for Washington Taxpayers?" (36). The Institute estimates that because of the expected reduced recidivism, taxpayers in Washington can save about $4,900 on average in subsequent criminal justice costs for each drug court participant. Given an approximate cost of

$2,000 per participant in drug court (including treatment and administrative costs), it is estimated that taxpayers get $2.45 in benefits for every dollar spent on the Drug Court.

From a strictly financial perspective, drug courts are considered to "break even" if they can achieve at least a 6.6 percent reduction in recidivism. Although there is no data at present that tracks recidivism over the lifetime of a drug user, data kept by the King County Drug Court shows that graduates of King County Drug Court have a nine percent recidivism rate one year after completion of the program. This compares favorably to the 25 percent rate for those who do not complete the program.

In addition, financial benefits are also realized from reductions in crime victims associated with recidivism. The Institute estimates that in addition to direct taxpayer benefits, crime victims can save, on average, between $1,150 and $3,450 in crime victim cost per drug court participant.

At the state level, the Drug Offender Sentencing Alternative (DOSA) is a treatment option for prisoners at state facilities. In order to qualify, the drug used by the defendant must be a small amount and the defendant must have no prior convictions for sex or violent crimes and no weapons enhancements. DOSA offenders serve half of the mid-point of the standard range in prison and the remaining half on community custody, receiving drug treatment both in the institution and in the community.

Summary

Relevant data from our criminal justice system shows a clear association between increased criminal activity and heroin usage. Alone, incarceration appears to have little or no effect on subsequent criminal activity of an addict. However, drug treatment has been demonstrated as effective in reducing criminal activity. At present, only those arrested and jailed for drug possession have the option of treatment. Detoxification, or the initial withdrawal from drugs, does occur in jail; however, there is no standard, humane approach employed for relieving withdrawal symptoms as patients adjust to a drug free state. Individuals on methadone treatment are now able to continue receiving methadone treatment in jail. There are no ongoing education efforts in jail about addiction and the risk behaviors associated with addiction.

Recommendations

Create opportunities within the public safety/criminal justice experience to insert education and treatment for addiction and education for those having contact with addicts.

1. Expand drug court funding and study whether it would be beneficial to expand drug court admission criteria to include facilitators of minor street heroin transactions; if admission criteria is expanded, secure necessary funding needed for more intensive treatment for individuals in this offender category.

2. Develop more funded treatment options for judges to order as a condition of sentencing for those addicted offenders who do not qualify for drug court.

3. Review and assess whether the sentencing structure for drug related crimes accurately reflects the nature/severity of the crime; revise sentencing structure as necessary.

4. For those in jail, provide education for addicts about treatment options, use life-saving measures in the case of overdoses, and work to prevent overdoses and skin infections around needle injection areas.

5. Educate law enforcement personnel about addicts, addiction, treatment and recovery.

TREATMENT CAPACITY AND ACCESS

Not only is drug use preventable, but drug addiction is treatable. Although an estimated 5.3 million people in the U.S. are in severe need of substance use treatment, only 37% receive such treatment (37). In particular for heroin users, it is estimated that only one person in five in need of treatment receives it (38).

Interdiction and Demand Reduction

The United States government spends nearly double the amount on supply reduction (interdiction), as on reducing demand through prevention and treatment. Numerous studies have convincingly shown treatment to be more effective than law enforcement and incarceration on decreasing the demand for illicit drugs (39, 40).

Inadequate provision of funds for prevention and treatment is an expensive societal course. For instance, providing treatment to all in need could save over $150 billion over the next 15 years, at a cost of just $21 billion in treatment cost (41). A large study in California demonstrated that every dollar invested in drug treatment generates seven dollars in savings of future costs (42).

While the ultimate goal of drug treatment is to end drug addiction for the individual, significant personal and community benefits may be also be achieved as a result. Not only does treatment offer an end to illicit substance use and the crimes and diseases associated with it, but it also allows the drug user to function productively in the family and the workplace. Overall, treatment of addiction is as successful as treatment of other chronic diseases, such as diabetes, hypertension and asthma (43). According to several studies, drug treatment reduces drug use by 40-60 percent and significantly reduces criminal activity, both during and after treatment (43).

In particular, substance abuse treatment has a pronounced positive impact in several areas of interest, including: illegal drug use, criminal activity, victimization, hospital visits, inpatient mental health visits, homelessness, exchange of sex for money and drugs, HIV-related risk behaviors, welfare dependency, relapse and criminal activity among inmates

who receive treatment in prison, and unemployment (44, 45). Furthermore, treatment can improve prospects for employment, with gains up to 40 percent after a single treatment episode (46). Treatment of women addicted to drugs has also been shown to improve rates of healthy pregnancies (47). Lastly, treatment affects the mortality of opiate-dependent people. Studies show that the median death rate for opiate dependent persons in methadone maintenance treatment was 30 percent of the death rate of those not in treatment (48).

These effectiveness rates hold in general, but individual outcomes depend upon the extent and nature of the individual's presenting problems, the appropriateness of the treatment and services used to address the problems, and the individual's degree of active engagement in the treatment.

Treatment Modalities and Venues

Drug treatment is delivered in numerous settings, using a variety of behavioral and pharmacological approaches. In the United States, more than 11,000 specialized drug treatment facilities provide rehabilitation, counseling, behavioral therapy, medication, case management, and other related of services. Treatment is delivered in outpatient, inpatient and residential settings; outpatient treatment accounts for about half of all treatment (49). Drug addiction treatment can include behavioral therapy, medications, or some combination of both.

Including both public and private facilities, there are 118 certified treatment providers in King County. This includes three methadone treatment providers (offering eight different methadone programs) and ten inpatient and residential treatment centers. Additionally, there are also four Washington State Department of Corrections work release programs that offer treatment. Approximately 11,000 individuals in a year receive treatment, including detoxification, in these settings (50).

Behavioral or drug-free therapies, such as counseling, cognitive therapy, or psychotherapy offer individuals strategies for coping with their drug cravings, teach them ways to avoid drugs and prevent relapse and help them deal with relapse if it occurs. Outpatient drug-free treatment varies in the type and intensity of services offered and is often more suitable for individuals who are employed and have extensive social supports. Long-term residential treatment provides 24-hour care, generally in non-hospital settings.

The best-known residential model is the therapeutic community (TC), which has planned lengths of stay from six to twelve months. This type of treatment is highly structured and focuses on developing personal accountability and responsibility. Compared with other forms of treatment, the typical TC resident has more severe problems with more criminal involvement. Short-term residential programs provide intensive, but brief treatment based on a modified 12-step approach. The original TC programs consisted of a three to six week hospital stay followed by outpatient therapy; reduced health care coverage has resulted in a reduced number of these programs.

Pharmacologic treatments for heroin addiction include:

- Agonist treatment including Methadone or LAAM (levo alpha acetyl methadol) which block the effects of opiate use and decrease opiate craving
- Partial agonist Buprenorphine, similar in effectiveness to methadone
- Antagonist treatment involving Naltrexone which, if taken after an individual is medically detoxified and opiate free for several days, blocks the effects of opiates

Compared to other modalities, methadone maintenance treatment (MMT) is the most rigorously studied and has yielded the best results (51). MMT has been shown to reduce HIV risk behavior and HIV incidence, reduce overall mortality to 30 percent of those not in treatment, reduce criminal behavior by as much as 50 percent, and reduce and often eliminate heroin use among addicts. In addition, MMT treatment has been shown to provide a significant and consistent reduction in the use of other illicit drugs including cocaine and marijuana, and in the abuse of alcohol and benzodiazepines, barbiturates and amphetamines (52).

The effectiveness of MMT is dependent on many factors including adequate dosage, duration and continuity of treatment, and accompanying psychosocial services. For instance, clients treated for less than three months show little or no improvement; most clients require continuous treatment over a period of years, and perhaps for life. Client attributes linked to better outcomes include older age, later age of dependence outset, less abuse of other substances particularly cocaine and alcohol, less criminal activity and high motivation for change (53)

LAAM acts in a similar manner as methadone, but has the advantage of being administered less frequently. Both methadone and LAAM are dispensed through clinics that are heavily regulated by the federal government and often state and local government. Despite the effectiveness of the treatment, six states presently do not allow MMT or LAAM (54).

Under current state law, in Washington State treatment programs are certified by the Department of Social and Health Services to administer methadone, and caseloads are limited to 350 persons per program. Counties have the authority to prohibit treatment programs within their boundaries. Physicians are not authorized to dispense opiate substitutes within their own individual practices for heroin addiction. Thus far, only four counties -- King, Pierce, Spokane and Yakima -- have approved methadone programs. Legislation passed in the 2001 session, however, may change this situation by allowing the State to control and regulate opiate substitution treatment programs after consultation with cities and counties.

Current methadone programs require that patients pick up their methadone daily until they have stabilized on a dose that ideally eliminates drug craving. Patients must attend regular counseling, and are monitored at least monthly with urine drug tests. Methadone programs are limited by regulation of clinical issues such as take-home dosages, monitoring, and even limitations on dose. This decreases the flexibility of programs to craft individual treatment plans. Stigma and fear of methadone programs commonly

creates local opposition to large programs, making expansion of treatment capacity difficult. Isolation from mainstream medicine is associated with poor funding compared to other effective medical therapy. Even when funding is available, access to treatment is poor and waiting lists in many areas are often months long.

One response to the problems raised above is to re-integrate opiate addiction treatment into medical practice. This can be achieved through a model called "medical maintenance", where methadone programs transfer successful, long term methadone maintenance clients to a medical setting and allow them fewer treatment visits and more take home medication than current regulations allow. Locally, a pilot medical maintenance program has been developed and implemented through a collaborative effort of Harborview Medical Center, Evergreen Treatment Service, the University of Washington and the Washington State Division of Alcohol and Substance Abuse. Federal, state and local waivers were required, and evaluation support for a 30 patient pilot program was obtained from the Robert Wood Johnson Foundation.

The pilot medical maintenance program features monthly physician visits, close ties to the treatment program, and pharmacy dispensing of up to one month of take home methadone in solid form. Presently, the cost of the pilot is projected to be less than regular treatment. Such programs improve access to treatment by opening up slots in traditional programs and reduce stigma of treatment for those who access methadone through mainstream medicine. In addition, physicians gain skills in addiction medicine. More flexible policies permitting medical maintenance have been included in recent and upcoming changes in federal and state methadone regulation.

A new drug, Buprenorphine, shown to be comparable to methadone in a number of studies, reduces drug craving and blocks heroin effects. It has less overdose potential than methadone and when used with naloxone, reduces abuse potential. Buprenorphine is awaiting approval from the US Food and Drug Administration. Recent federal legislation will allow doctors in office-based practices to prescribe Buprenorphine once it is approved; however, funding for the medication for the medically indigent has not yet been authorized.

Cost-effectiveness of Treatment

Drug addiction treatment is cost effective, much more so than incarceration of addicted individuals. For example, MMT costs approximately $3,600 per year locally whereas one year of imprisonment costs approximately $18,400. Based on conservative estimates, every dollar invested in treatment programs yields between four and seven dollars in savings from reduced drug-related crime, criminal justice, and theft costs alone. When health care savings are included, total savings can exceed costs by a ratio of 12 to 1 (55). The financial costs of untreated opiate dependence to the individual, family, and society are estimated to be approximately $20 billion per year; the cost of human suffering is incalculable (56).

Because drug abuse and addiction are significant public health problems, a large portion of treatment is publicly funded. In addition, some health plans provide limited coverage and individuals pay for treatment. In Washington State, treatment costs totaled $160 million in 1996 (57). The single largest payer source was the federal government (excluding Medicare and Medicaid), which accounted for 22.9 percent of all treatment funding. Other important funding sources included client payments (21.7 percent), state funding (19.2 percent), private health insurance (18.5 percent), Medicaid (9.1 percent), local government funds (3.9 percent), and Medicare (2.1 percent).

In Seattle and King County, drug treatment admissions for those who use primarily heroin continue to increase (58). In 1998, there were 1,140 treatment admissions for heroin (out of about approximately 14,000 heroin addicts in the County); this number increased to 1,512 in 1999. As of June 2000, there were 834 admissions. If the rate of these admissions remains the same throughout 2000, it would represent a 10 percent increase over 1999 and a 37 percent increase over 1998. Some of the increase in treatment for heroin may be attributed to the new mobile methadone program that began enrolling clients in 1999. However, demand and wait for drug treatment remains extremely high.

According to "Principles of Drug Addiction Treatment" published by NIDA in 1999 (59), some principles of effective treatment include:

- No single treatment is appropriate for all individuals.
- Treatment needs to be readily available (taking advantage of the opportunity when the individual is ready for treatment).
- Effective treatment attends to multiple needs of the individual, not just the addiction.
- Remaining in treatment for an adequate period of time is critical for treatment effectiveness (research indicates that for most patients, the threshold of significant improvement is reached at about three months in residential or outpatient, non-medical treatment and at least 12 months in methadone maintenance although many are in treatment for years).
- Counseling and medication are effective elements of treatment.
- Medical detoxification is only the first step of addiction treatment and by itself does little to change long term drug abuse.
- Recovery from drug addiction can be a long term process and frequently requires multiple episodes of treatment.

Completion of treatment depends upon factors associated with both the individual and the program. Individual factors related to whether a person remains in treatment include: motivation to change drug-using behavior, degree of support from family and friends, and pressure from the criminal justice system, child protective services, employers, or the family (60).

Recommendations

Enhance the effectiveness, accessibility and funding of current treatment programs

1. Provide treatment to all heroin addicts who request it without limitations of waiting periods, insurance/funding, or location; this includes providing funds for currently unfunded methadone treatment slots.

2. Review and update regulations that restrict methadone availability and distribution, including moving patients out of methadone clinics to a physician-based program when they become stable; explore legislative and regulatory avenues for expansion of physician prescription of pharmacological agents to treat addiction.

3. Provide humane options for individuals in jail to withdraw from drugs; provide seamless treatment so that incarcerated addicts may initiate or continue treatment, and have continuity of outpatient treatment upon their release.

4. Support comprehensive programs that link survival services more closely to treatment (e.g., housing, transportation, child care, job skills training, help with domestic violence and mental health issues).

5. Expand hours of methadone treatment clinics (in particular, open evenings after 5 PM).

6. Support case management for pregnant and parenting heroin-addicted women.

7. Investigate the feasibility of a methadone residential care treatment center.

8. Improve access to medical services for drug users through such venues as the Needle Exchange and community clinics.

9. Address the inconsistency of health plans in regard to the extent they cover substance use benefits

HEALTH EFFECTS OF HEROIN USE/EDUCATION OF PROVIDERS

Regardless of the conditions that lead to opiate exposure, opiate dependence is a brain-related disorder with the requisite characteristics of a medical illness (61).

Short and Long Term Effects of Heroin Use

The short-term medical consequences of heroin use include: depressed respiration, clouded mental functioning, nausea and vomiting, and suppression of pain.

Long term, the effects of heroin use are much more insidious, including:
- Addiction, overdose and death
- Scarred or collapsed veins
- Bacterial infections of blood vessels and heart valves

- Lung complications (e.g., pneumonia and tuberculosis resulting from poor health conditions of the abuser as well as depressed respiration)
- Abscesses at injection sites, in the brain and elsewhere
- Clogged blood vessels to major organs due to additives in street heroin
- Arthritis, rheumatologic disorders, and emphysema caused by immune reaction to drug contaminants
- Exposure to blood borne infections including HIV, hepatitis A, hepatitis B, hepatitis C, HTLV-1 and 2 and possibly syphilis

Heroin abuse can also cause serious complications during pregnancy, including miscarriage and premature delivery. Children born to addicted mothers are at greater risk of Sudden Infant Death Syndrome (SIDS).

As a whole, addiction-related deaths (including accidental overdose), drug-related accidents and illnesses directly attributable to chronic drug dependence explain one-fourth to one-third of the mortality in an opiate addicted population (62).

Use of Health Care

Typically, heroin addicts receive sporadic health care and frequently wait until they are very ill before seeking care in the emergency room (63). From a financial perspective alone, this pattern proves to be costly, as medical care in the later stages of illness is generally more expensive than early or preventive care. Nationally, the costs of the medical consequences of drug abuse are estimated at $5.5 billion; this total does not include all medical costs, but does take into account some hospital costs as well as the costs of drug exposed infants, TB, HIV/AIDS, hepatitis and violent crime. The cost of opiate dependence alone is estimated at $1.2 billion per year (64).

Nationally, injection is the preferred method of heroin administration by most users. Drug injection has been linked to a number of broad-based infections including HIV/AIDS and hepatitis B and C viruses. Within King County (65):
- More than 80 percent of heroin addicts are infected with hepatitis C
- Approximately 70 percent are infected with hepatitis B
- About 2-3 percent carry the HIV virus (In Vancouver, B.C., this number has been documented as high as 23 percent)

The principal mechanism for HIV infection in newborns is through the mother's injection drug use.

Health Status of Injection Drug Users

In addition to the aforementioned infections, general health status in injection drug users is also compromised. Significant health consequences for injectors include:
- Heart valve infections
- Brain abscesses
- Pneumonia

- Tuberculosis
- Chronic hepatitis
- Cirrhosis
- Liver cancer

In major metropolitan areas from 1991-95, the annual number of opiate-related emergency room visits increased from 36,000 to 76,000, and the annual number of opiate deaths increased from 2,300 to 4,000. This associated morbidity and mortality further underscores the human, economic and societal costs of addiction (66).

A specific example of these costs comes from San Francisco. For the fiscal year of 1998-99, soft tissue infection (STI) was the most frequent single admitting diagnosis at San Francisco General Hospital accounting for 10.2 percent of all inpatient admissions. A study to estimate the likelihood of the admissions being injection drug users was conducted on a small random sample of those treated for STI in the ER and inpatient setting during 1998-99. Of the individuals studied, 70 percent had evidence of recent injection drug use (85 percent with heroin) (67). Other heroin data would seem to suggest that heroin related problems in the region are similar to those in San Francisco.

Illicit drugs such as heroin produce an altered brain state that affect many aspects of brain function. Using brain imaging techniques, scientists have demonstrated that illicit drugs can cause significant damage to an important class of brain cells, resulting in slowed thinking, depressed mood and motor impairment. These effects can be long term and persist even after drug use is halted (68).

Despite the serious and often fatal outcomes of opiate dependence, most health professionals are not appropriately trained in how to recognize, diagnose and treat addiction. In general, there are neither courses in professional schools nor on-the-job training. Clearly, heroin users could benefit from interaction with a skilled health professional.

Strategies for Preventing Health Consequences of Heroin Use

Strategies for preventing the medical consequences of heroin use include:
- Having a needle exchange
- Offering drug treatment
- Conducting HIV and hepatitis C education and testing
- Conducting screening for abuse and dependence
- Giving hepatitis A and B vaccinations
- Promoting cleaning the injection site prior to injection
- Administering vein care.

In regard to the effectiveness of needle exchanges, a Seattle study found that the presence of a needle exchange was related to a decrease in drug use, increase in entry and retention in treatment, decrease in syringe sharing, and possibly benefits in controlling the spread of HIV (69).

Recommendations

Educate health care and treatment personnel about addiction and the accompanying range of medical, mental, public health and social service needs.

1. Increase the comfort and competency level of health care practitioners who see addicts about their medical problems as well as their knowledge about the range and efficacy of treatment options. Train health care personnel in how to screen for and recognize heroin addiction as well as do referrals and treat it in the most appropriate setting. Educate all health care personnel about the continuum of care needed by a heroin addict.

2. All treatment counselors about when a person needs to be supported into a methadone treatment program, when a person would benefit from a drug-free setting, and when inpatient and residential treatment would be appropriate. Educate all treatment counselors about the continuum of care needed by a heroin addict

3. Educate health care workers within the scope of their professional training to understand addiction as a medical problem and to recognize the medical, mental and social problems associated with heroin use

EMERGENCY RESPONSES AND HEROIN OVERDOSES

The number of opiate-related deaths in King County rose 140 percent from 1990 through 1999, a time during which the population increased by only 11 percent (70). Opiate-related deaths peaked at 144 deaths in 1998 (a 206 percent increase). Almost all opiate-related deaths were from opiate overdoses; approximately four deaths per year are from non-overdose events such as infections at the site of the injection.

Heroin-Related Deaths in and Outside the Region

Most opiate-related deaths (85 percent) occurred in males between 25 and 54 years of age (median age 40). The vast majority of deaths were unintended, while a very small percent (one to three percent) were deemed suicide. Eighty-three per cent of those that died were Caucasian, 13 percent African American, 3 percent Native American and 1% of other ethnic/racial background. However, death rates in African Americans and Native Americans were over twice the rate seen in whites.

As for location, at least eighty-two per cent of opiate-related deaths occurring in King County are in King County residents. Overdoses have occurred in every area of the county except Vashon Island with a concentration in central and north central Seattle.

The majority of opiate-related deaths also had involvement of another drug or alcohol. Cocaine and/or alcohol were found in 69 percent of opiate related deaths in King County

from 1996 to 1998 (71). In a separate Washington State study, 83% of opiate related deaths had the following drugs present in addition to heroin: alcohol, cocaine, benzodiazepines, marijuana, methamphetamines, other depressants, and other opioids (72). Overall, the increasing number of fatal overdoses during the 1990's do not seem to be related to any increased purity of drug (73).

Dramatic increases in opiate related deaths over the last several decades have occurred in other areas of the region (e.g. Multinomah County, Oregon) as well as internationally (e.g. Australia). In San Francisco, for example, heroin overdose was the third leading cause of years of lost life in the city after heart disease and HIV infection (74). Deaths reported to the national Drug Abuse Warning Network (DAWN) from 1994-1998 increased 25.7 percent; DAWN collected information on drug-abuse related deaths from medical examiners in 137 jurisdictions in 40 metropolitan areas throughout the US during that period (75).

Multiple Drug Use in Heroin-Related Deaths

Heroin overdoses seem to be strongly related to combining heroin with other drugs, using alone, not calling for emergency assistance and using after a period of abstinence such that tolerance for the usual dose of drug is reduced. Data from San Francisco indicate that 98 percent of people who have overdosed also have alcohol and other central nervous system depressants in their blood and 25 percent of all overdose deaths occur within seven days of being released from jail or detoxification**.** In addition, even though 80 percent of users inject with a partner, 80 percent of overdose cases found by emergency medical personnel are alone (76).

Emergency Response in Heroin Overdoses

In two recent studies of heroin overdoses, approximately two-thirds of bystanders failed to call 911 in Santa Cruz and one quarter in San Francisco due to their fear of prosecution (77). Not calling for emergency assistance is related to the caller believing that s/he will be arrested on drug charges if the police are dispatched with the Medics. While the person who has overdosed is not generally arrested for drug use, others found at the scene may be investigated and may be arrested for drug possession or related charges e.g. outstanding warrants. The perception that a bystander may be at risk for arrest reduces the likelihood that the bystander will provide first aid, call 911 and stay until help arrives. Failure to provide first aid and to call 911 markedly reduces the chances of survival from a heroin overdose. Based on a growing number of adverse outcomes, police response to heroin overdoses has been revised in a number of areas most notably Santa Cruz, California and Sydney, Australia in order to encourage more 911 contacts in overdose situations.

In Washington state, the Washington State Medical Association House of Delegates passed a resolution urging city, county, state and federal public health, law enforcement, fire and emergency medical service agencies to develop, implement, and publicize policies that will remove the threat of prosecution of bystanders at illicit drug overdoses.

Removing the threat would allow the bystander to call 911 and to provide first-aid for overdose victims without fear of arrest. Underlying the resolution is the belief by the WSMA that there is a greater public benefit to saving lives than prosecuting non-violent, drug-related crimes (78).

Strategies for Preventing Heroin Overdoses

Prevention of heroin overdose deaths involves strategies to:

- Reduce heroin use (including increasing access to funded treatment)
- Prevent overdose by educating users about low tolerance, using with others, and the risk of poly-drug use
- Prevent death once an overdose has occurred by educating users to avoid taking other depressant drugs along with heroin (alcohol, tranquilizers, etc) and to recognize the signs of an overdose; training users in first aid; discouraging non-medical approaches to overdose; and encouraging calls to 911

Major cities in England and Australia have begun exploring whether to dispense naloxone (Narcan), an effective antidote for heroin overdoses, to heroin users. In addition, supervised injecting rooms staffed by health care workers and started in a number of European countries have been associated with a decrease in drug overdose deaths (79).

Recommendations

Take steps to reduce the number of opiate-related deaths.

1. Educate users about the danger of using heroin alone and mixing opiates with other drugs, as well as the most susceptible times for overdoses; in particular educate people in jail about the higher risk of overdose upon release.

2. Better understand the factors contributing to opiate-related overdoses by collecting/reviewing data describing the circumstances of overdose deaths (death review); match overdose deaths with EMS and police response rates and arrest data when possible.

3. Investigate whether protocols around EMS and police dispatch to scenes of drug overdose need to be revised in order to encourage bystanders to call 911. Obtain and review protocols and data from other regions/countries that have made recent changes in 911 and/or police dispatching to see if these changes are warranted in Seattle King County. Design and implement prospective data studies (involving the King County Prosecutor's Office, medical examiner's office, emergency medical services and the Seattle Police Department and the King County Sheriff) for purposes of better describing the perceptions and issues surrounding police presence at emergency response scenes. Educate users and others around the protocol for emergency response.

4. Improve bystander response to overdoses by teaching heroin users and their significant others life-saving techniques.

INTERVENTION PROGRAMS FOR DRUG USERS AND THOSE AT-RISK FOR DRUG USE

The consequences of heroin addiction for the addict are outlined in the above sections. Preventing or reducing heroin use in the heroin addict has positive consequences to the individual including reduced criminal activity, increased productivity, and reduced illness and untimely death due to overdose, communicable diseases such as hepatitis and HIV/AIDS and other acute and chronic medical conditions. Programs that target heroin users are cost effective and can result in dramatic behavior changes. Information and recommendations about prevention programs targeting drug users can be found in previous sections of this report.

Programs that prevent or reduce drug use in the general population or in those at risk for drug use are under study and offer many positive and hopeful results.

Over the past thirty years, studies have shown that substance abuse, like cardiovascular disease, can be predicted based on multiple risk factors in the individual as well as in the environment. Moreover, evidence indicates that the likelihood of drug abuse is higher among those exposed to multiple risk factors. By reducing or eliminating these risk factors, it should be possible to lower the rate of substance abuse.

Risk Factors for Substance Abuse

Family risk factors that increase risk of substance abuse include: substance abuse by parents, poor family management practices, family conflict, favorable attitudes of parents towards drug use and parent's involving their children in their drug use. Other risk factors for substance abuse that parents can affect include: antisocial behavior in early adolescence (e.g., fighting, truancy and delinquent behavior), early first use, and peer influences (80).

Community risk factors include economic and social deprivation, low neighborhood attachment and community disorganization, community laws and norms favorable to drug abuse, and the availability of drugs (81)

Factors That Protect Against Substance Abuse

There is evidence that the risk factors can be buffered or moderated by a variety of individual and social characteristics that can be viewed as protective factors (82).

Three broad categories of protective factors have been identified. These are:
1) individual characteristics including resilient temperament, positive social orientation and intelligence (83).

2) family and outside social supports characterized by warm, supportive relationships or bonding such as parent-child attachment and warmth, parent support of a child's. competencies, and positive parent-child interaction and communications (84) (85)
3) healthy beliefs and clear standards that promote positive social behavior (86) (87).

Factors That Predict Continuing Substance Abuse

Effective prevention not only looks at reducing risk factors and increasing protective factors, but also includes the prevention of relapse. Based upon a review of 69 published studies, ten variables were found to be significant predictors of continued drug use among opiate users (88):

- High level of opiate use prior to entering treatment
- Prior treatment for opiate addiction
- No prior abstinence from opiates
- Abstinence from, or light use of alcohol
- Depression
- High Stress
- Unemployment or employment problems
- Association with people who continue to abuse substances
- Short length of treatment
- Leaving treatment prior to completion

Children of drug-abusing parents are likely to be exposed to many risk factors in addition to possibly having a physiological predisposition to drug abuse. They also are likely to have inadequate parental supervision and support and have their parent's drug use and illegal behavior as models (89). Training parents during their own treatment to act as prevention agents for their children holds promise for breaking the cycle of addiction.

Programs to Prevent or Reduce Drug Use

In 1997, NIDA adopted the Institute of Medicines proposed classification of research-based, drug prevention programs. In this model, programs are classified according to the audience for which they are designed. The classification is as follows:

- Universal Programs: target the general population, such as all students in a school or all students in a city in first through sixth grade
- Selective Programs: target groups at risk or subsets of the general population such as children of drug users or school drop-outs
- Indicated Programs: target those who are already experimenting with drugs or have other risk-related behaviors

The Seattle and King County area has the good fortune to be a site for programs representing all three categories of intervention. Representatives of the various programs were able to attend the Task Force meeting and describe their interventions and research results.

Universal Programs: The Seattle Social Development Project, also known as Raising Healthy Children (90), is a school-based intervention tested in Seattle and Edmonds for grades one through six. The program seeks to reduce risks for drug abuse and delinquency by enhancing the type of protective factors listed above. The original intervention began in 1981 and extended over 6 years. It covered 598 students from 18 schools in Seattle and followed them through age 18. The full intervention provided in grades one through six included five days of in-service training for teachers each of the six years, parenting classes offered to parents of children were in grades one through three and five through six, and social skills training for children in grades one and six. Follow-up at age 18 showed significant reductions in antisocial behavior, improved academic skills, greater commitment to school, reduced levels of alienation and better bonding to positive influences, less misbehavior in school and fewer incidents of drug use in school compared to the control group that received no intervention.

Other examples of universal programs include Project STAR, Life Skills Training, and the ATLAS Program.

Selective Programs: Focus on Families (91) targets parents receiving methadone treatment through Therapeutic Health Services and their children. Begun in 1990, Focus on Families has worked with 130 families in the Seattle and King County area. The goal of the intervention is to reduce parent's use of illegal drugs by teaching them relapse prevention and coping skills. In addition, parents are taught to manage their families better. Early results indicate that parents' drug use has dramatically decreased and parenting skills are significantly better than the results obtained in a control group. However, at six and 12-month follow-up, there were no significant differences in the areas of drug use or delinquency in the children.

The Incredible Years (92), a parent, child and teacher intervention has been tested over an 18-year period with over 1000 families with young children who have aggressive behavior problems. The Basic Parent Training Program has been evaluated with over 700 high-risk Head Start families. The program offers parent, teacher and child training in areas of positive communication, child directed play, consistent and clear limit setting and nonviolent discipline strategies. Results indicate that parents and teachers are able to significantly reduce children's problem behaviors and increase their social and academic competence.

Another example of a selective program is the Strengthening Families Program. This program provides prevention programming for six to ten year old children of substance abusers.

Indicated Programs**:** Reconnecting Youth (93) is a school-based program that targets individuals in grades nine through twelve who show signs of poor school achievement and potential for dropping out of school. The program incorporates social support and life skills training in a semester-long, daily class designed to enhance self-esteem, and teach decision-making, personal control and interpersonal communication skills. The program focuses on increasing drug-free social activities and school bonding; a school-

based program for addressing crises and suicide prevention is also included. The results of the program show improved school performance, reduced drug involvement, increased self-esteem, personal control, school bonding and social support, while depression, anger, aggression, hopelessness, stress and suicidal behavior have been shown to decrease.

Another example of an indicated program is the Adolescent Transitions Program. This school-based program targets middle and junior high schoolers and involves their parents and the school staff in order to improve parenting practices and disseminate information about risk for problem behavior and substance abuse.

Summary

The number of programs that have been evaluated and shown to be effective is far fewer than the number of programs that are currently supported through public and private funding. In the area of juvenile delinquency, for instance, there are only about a dozen programs that are evidence based according to research from RAND, a non-profit domestic policy think tank. This fact highlights the importance of supporting evidence-based programs that focus on reducing known risk factors and enhancing protective factors, are linked with treatment and have a family, school and community-based focus.

Recommendations

Support proven, effective, culturally appropriate prevention efforts.

1. Identify gaps in prevention services and enhancements to better coordination and integration efforts.

2. Increase the number of research-based prevention programs that target an at-risk population and increase skills/positive attributes as well as protective factors, and work to improve child, parent, peer and teacher skills.

3. Encourage new approaches to school-based health services that involves public health, mental health, addiction services, schools and families.

4. Direct prevention efforts to families and children as a way to break the intergenerational cycle of addiction.

5. Allow heroin users greater access to clean syringes through purchase at pharmacies.

6. Train those who have most contact with at-risk youth in enhancing positive attributes and protective factors (e.g. - parks department, community center workers).

7. Have more readily accessible sharps containers in areas frequented by heroin addicts.

CONCLUSION

While heroin use is illegal, and heroin use is a choice, heroin addiction is a chronic medical illness that has overwhelming public health and societal consequences. Treating heroin addiction as a criminal justice problem and repeatedly imprisoning heroin addicts does nothing to address the cause of the behavior, namely addiction.

Continuing to support the current system, one that focuses on symptoms rather than causes, means that we are choosing the most expensive, least effective, and least humane way of addressing the impact of heroin addiction.

Addiction has been characterized as a brain disease shaped by behavioral and social context. In short, addiction takes over a person's life. It involves not only compulsive drug taking and at times uncontrollable drug craving, seeking and use, but a wide range of dysfunctional behaviors that interfere with normal functioning in the home, workplace and broader community. Additionally, addiction can place people at increased risk for a wide variety of other illnesses.

Treatment for this illness must help the individual stop using drugs and remain drug free as well as achieving productive functioning in the family, workplace and community.

Without help, adolescents and adults will suffer from addiction, poor health, unstable family relations, and other negative consequences of substance abuse. In addition, since parental alcohol and other drug abuse is a significant predictor of youth drug use, and is often the cause of serious child abuse and neglect, treatment for parents is key to breaking the inter-generational cycle of addiction. Not surprisingly, 56 percent of respondents to a survey conducted by the Harvard School of Public Health in 1997 identified drugs as the most serious problem facing children in the United States (94).

Drug abuse impairs rational thinking and the potential for a full, productive life. Drug abuse, drug trafficking, and their consequences destroy the personal liberty and well being of communities. Crime, violence, workplace accidents, family misery, drug-exposed children and addiction are only part of the price imposed on society. Drug abuse spawns global criminal syndicates and bankrolls those who sell drugs to young people. Illegal drug use indiscriminately destroys old and young, men and women from all racial and ethnic groups and every walk of life.

Action needs to be taken to prevent drug abuse, increase availability and accessibility of treatment, and break the cycle of addiction. It is the intent of the Heroin Initiative to study the roots of the problem, evaluate effective prevention and treatment modalities and recommend action. Drug addiction is a medical and public health issue. Like alcoholism, it is a disease that can be successfully treated to decrease harm to the individual and society.

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Attachment I
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Attachment 2

Heroin Task Force Recommendations

(Prioritized within each category)

Create opportunities within the public safety/criminal justice experience to insert education and treatment for addiction and education for those having contact with addicts.

3. Expand drug court funding and study whether it would be beneficial to expand drug court admission criteria to include facilitators of minor street heroin transactions; if admission criteria is expanded, secure necessary funding needed for more intensive treatment for individuals in this offender category.

4. Develop more funded treatment options for judges to order as a condition of sentencing for those addicted offenders who do not qualify for drug court.

5. Review and assess whether the sentencing structure for drug related crimes accurately reflects the nature/severity of the crime; revise sentencing structure as necessary.

6. For those in jail, provide education for addicts about treatment options, use life-saving measures in the case of overdoses, and work to prevent overdoses and skin infections around needle injection areas.

5. Educate law enforcement personnel about addicts, addiction, treatment and recovery.

<u>Enhance the effectiveness, accessibility and funding of current treatment programs.</u>

1. Provide treatment to all heroin addicts who request it without limitations of waiting periods, insurance/funding, or location; this includes providing funds for currently unfunded methadone treatment slots.

2. Review and update regulations that restrict methadone availability and distribution, including moving patients out of methadone clinics to a physician-based program when they become stable; explore legislative and regulatory avenues for expansion of physician prescription of pharmacological agents to treat addiction.

3. Provide humane options for individuals in jail to withdraw from drugs; provide seamless treatment so that incarcerated addicts may initiate or continue treatment, and have continuity of outpatient treatment upon their release.

4. Support comprehensive programs that link survival services more closely to treatment (e.g., housing, transportation, child care, job skills training, help with domestic violence and mental health issues).
6. Expand hours of methadone treatment clinics (in particular, open evenings after 5 PM).

6. Support case management for pregnant and parenting heroin-addicted women.

7. Investigate the feasibility of a methadone residential care treatment center.

8. Improve access to medical services for drug users through such venues as the Needle Exchange and community clinics.

9. Address the inconsistency of health plans in regard to the extent they cover substance use benefits

Educate health care and treatment personnel about addiction and the accompanying range of medical, mental, public health and social service needs.

1. **Increase the comfort and competency level of health care practitioners who see addicts about their medical problems as well as their knowledge about the range and efficacy of treatment options. Train health care personnel in how to screen for and recognize heroin addiction as well as do referrals and treat it in the most appropriate setting. Educate all health care personnel about the continuum of care needed by a heroin addict.**

2. **Educate all treatment counselors about when a person needs to be supported into a methadone treatment program, when a person would benefit from a drug-free setting, and when inpatient and residential treatment would be appropriate. Educate all treatment counselors about the continuum of care needed by a heroin addict.**

3. Educate health care workers within the scope of their professional training to understand addiction as a medical problem and to recognize the medical, mental and social problems associated with heroin use.

Take steps to reduce the number of opiate-related deaths

1. Educate users about the danger of using heroin alone and mixing opiates with other drugs, as well as the most susceptible times for overdoses; in particular educate people in jail about the higher risk of overdose upon release.

2. Better understand the factors contributing to opiate-related overdoses by collecting/reviewing data describing the circumstances of overdose deaths (death review); match overdose deaths with EMS and police response rates and arrest data when possible.

3. Investigate whether protocols around EMS and police dispatch to scenes of drug overdose need to be revised in order to encourage bystanders to call 911. Obtain and

review protocols and data from other regions/countries that have made recent changes in 911 and/or police dispatching to see if these changes are warranted in Seattle King County. Design and implement prospective data studies (involving the King County Prosecutor's Office, medical examiner's office, emergency medical services and the Seattle Police Department and the King County Sheriff) for purposes of better describing the perceptions and issues surrounding police presence at emergency response scenes. Educate users and others around the protocol for emergency response.

4. Improve bystander response to overdoses by teaching heroin users and their significant others life-saving techniques.

Support proven, effective, culturally appropriate prevention efforts.

1. Identify gaps in prevention services and enhancements to better coordination and integration.

2. Increase the number of research-based prevention programs that target an at-risk population and increase skills/positive attributes as well as protective factors, and work to improve child, parent, peer and teacher skills.

3. Encourage new approaches to school-based health services that involves public health, mental health, addiction services, schools and families.

4. Direct prevention efforts to families and children as a way to break the intergenerational cycle of addiction.

5. Allow heroin users greater access to clean syringes through purchase at pharmacies.

6. Train those who have most contact with at-risk youth in enhancing positive attributes and protective factors (e.g. - parks department, community center workers).

7. Have more readily accessible sharps containers in areas frequented by heroin addicts.